

FIG.1

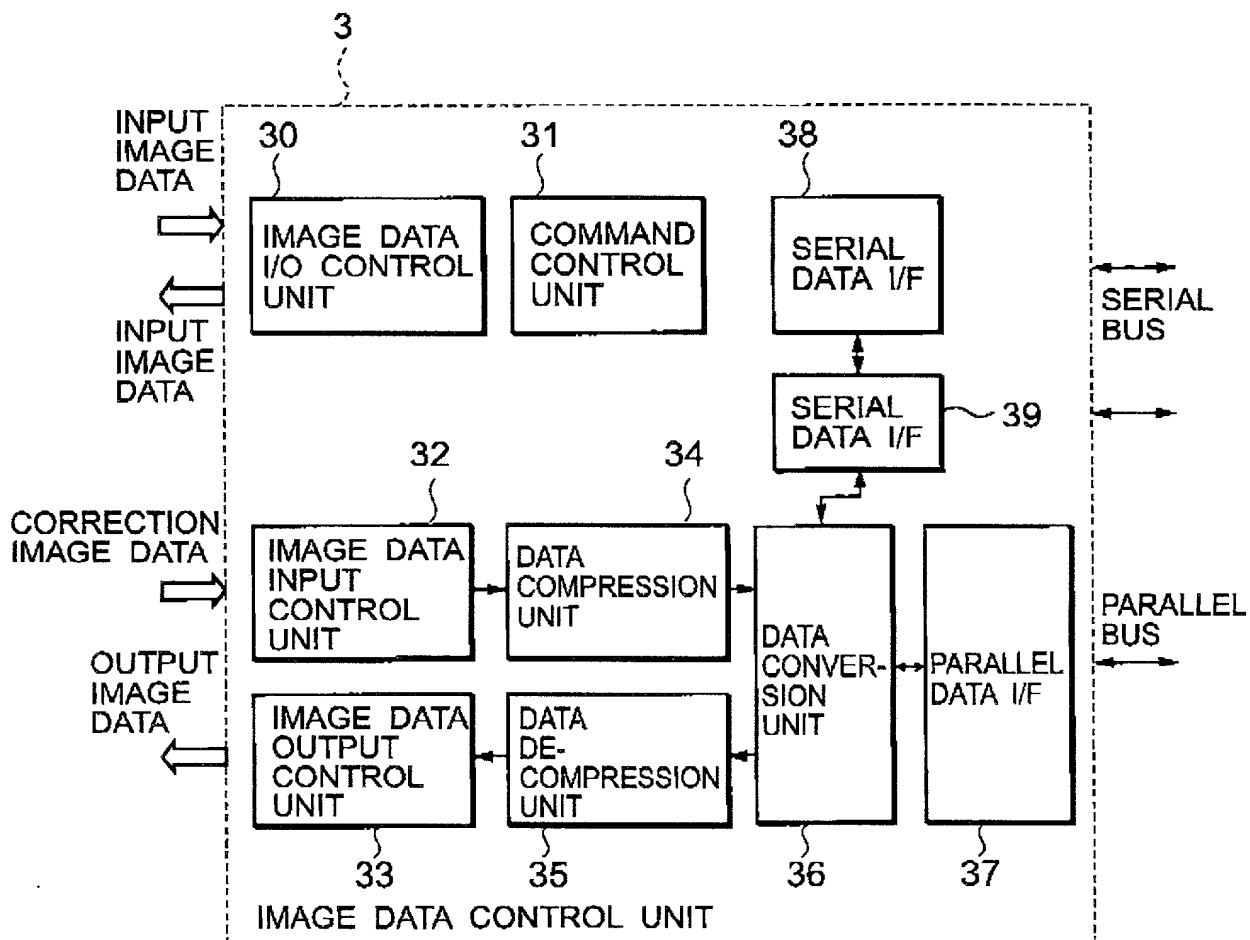


FIG.2

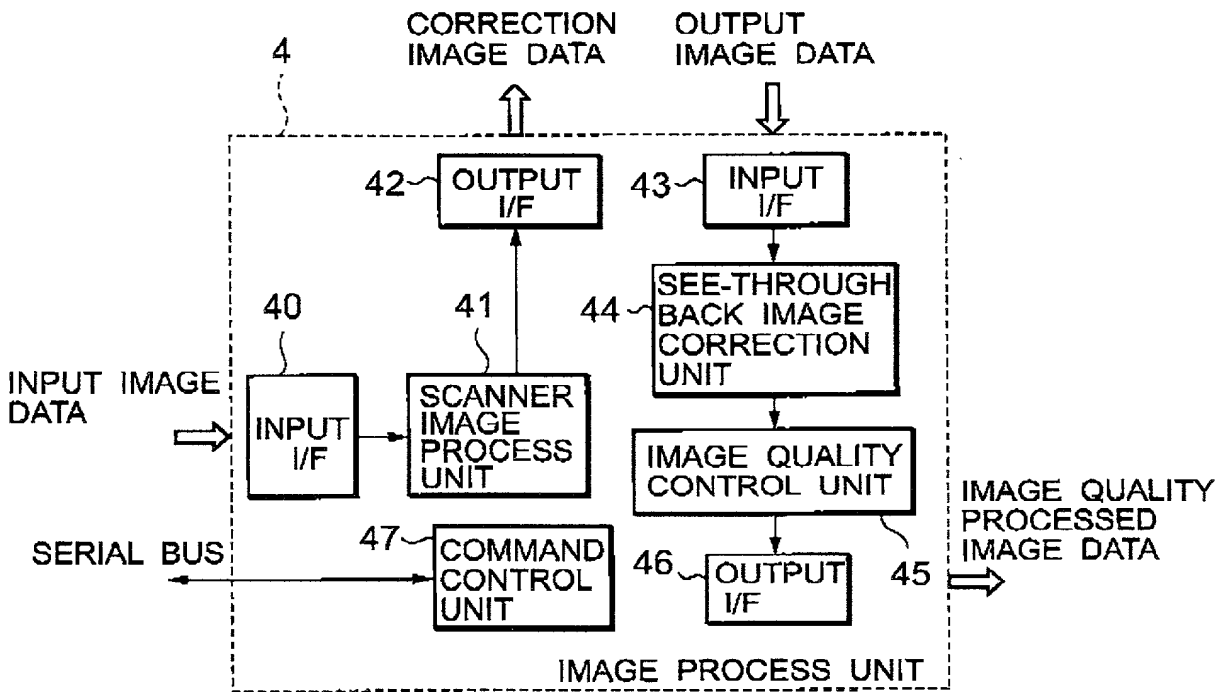


FIG.3

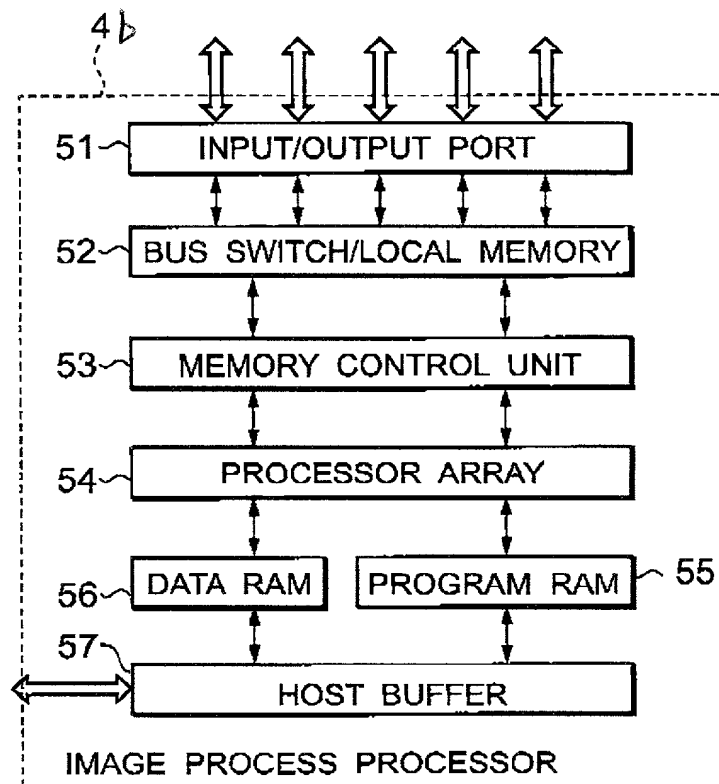


FIG.4

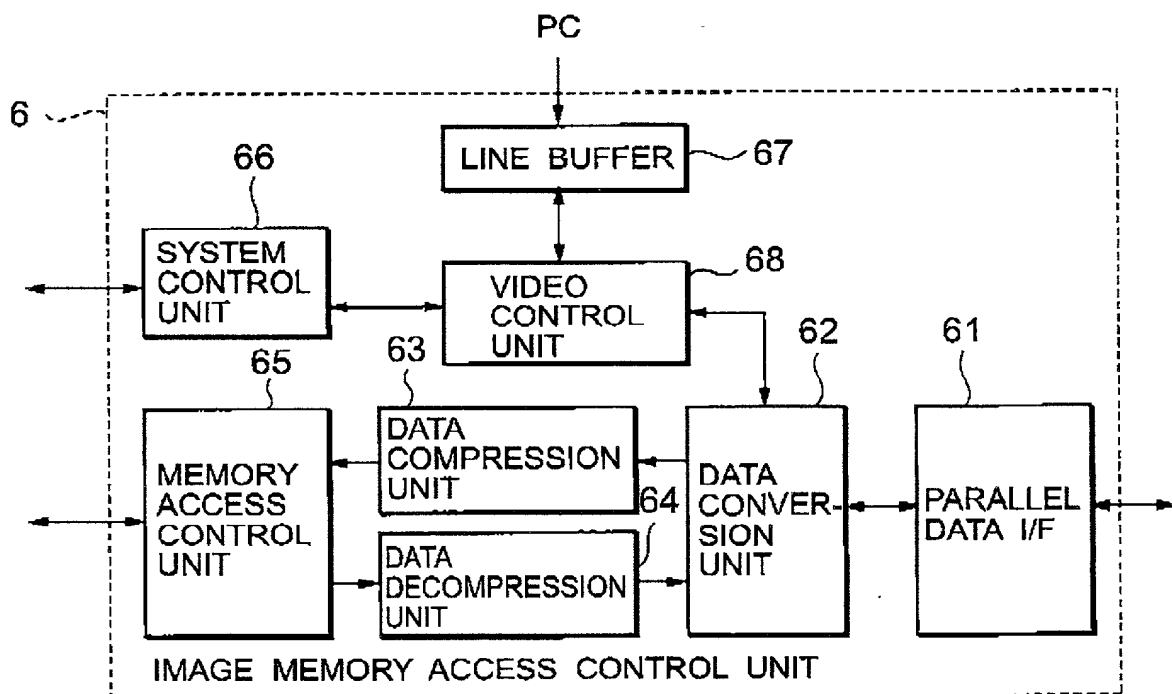


FIG.5

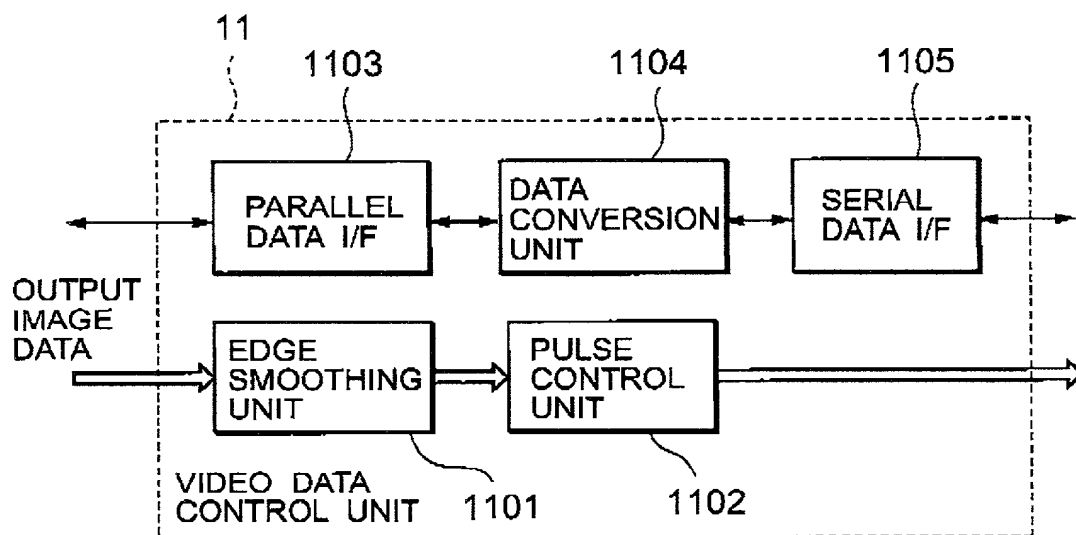
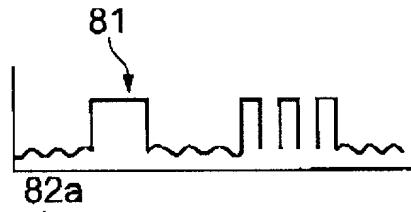


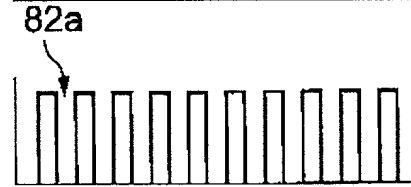
FIG.6

FIG.7A



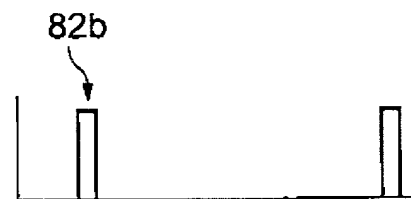
FRONT IMAGE

FIG.7B1



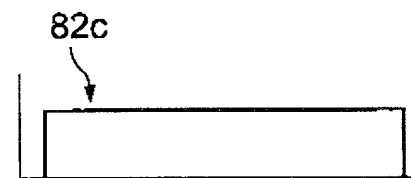
BACK IMAGE  
(DOT PATTERN)

FIG.7B2



BACK IMAGE  
(CHARACTER)

FIG.7B3



BACK IMAGE  
(THICK)

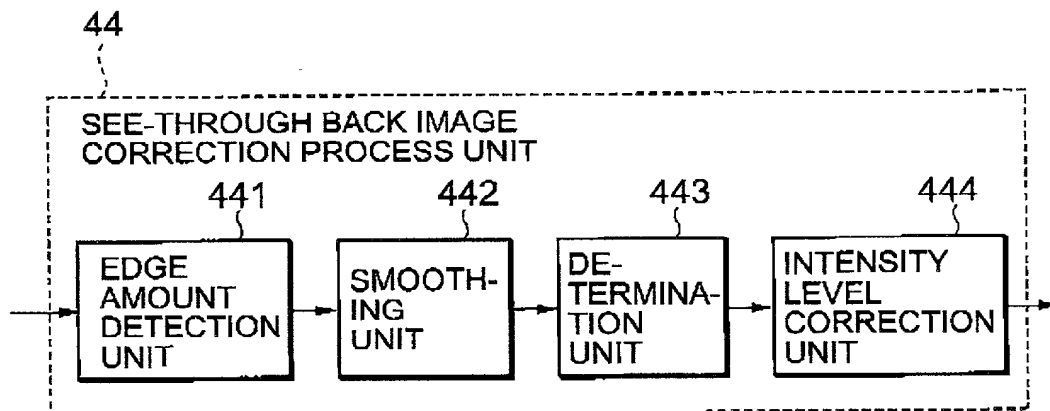


FIG.8

$$L1 = \begin{bmatrix} & -1 & \\ -1 & +4 & -1 \\ & -1 & \end{bmatrix}$$

FIG.9

FIG.10A

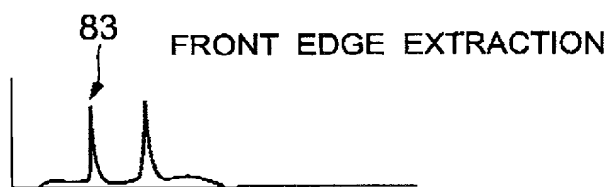


FIG.10B



$$L2 = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 2 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \end{bmatrix} \times 1/26$$

FIG.11

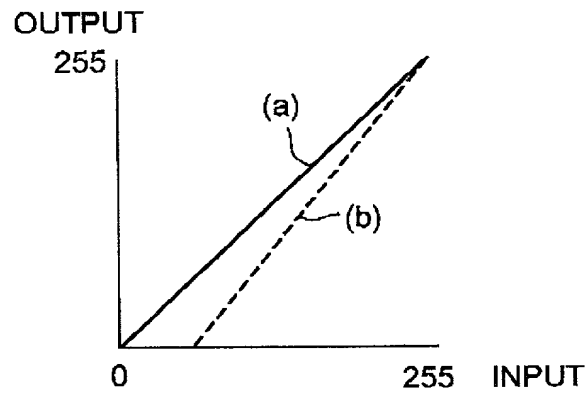


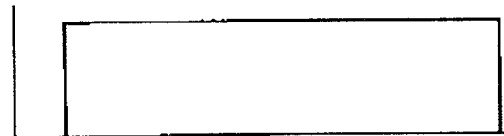
FIG. 12

FIG. 13A



BINARIZATION

FIG. 13B



FOUR PIXEL  
ENLARGEMENT

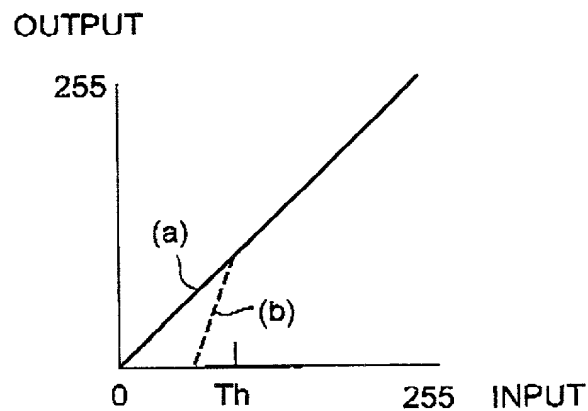


FIG. 14

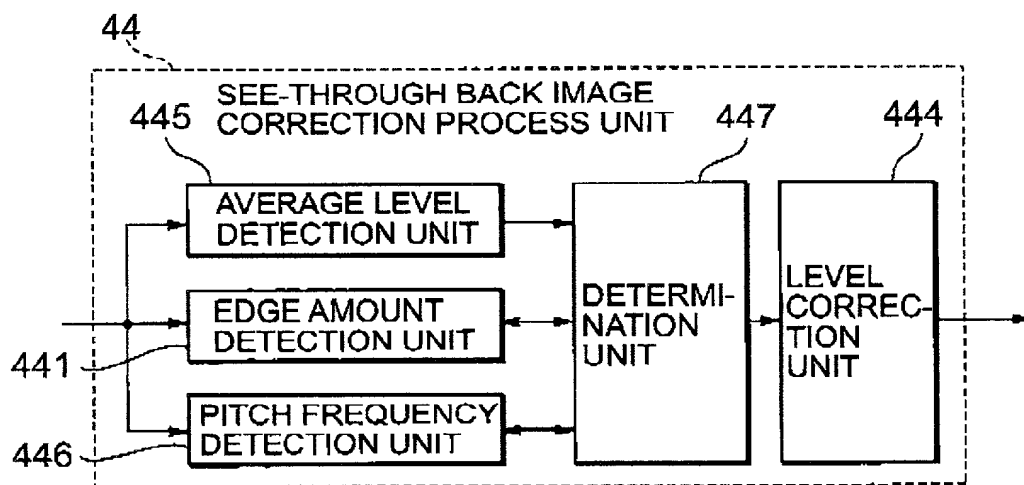


FIG.15

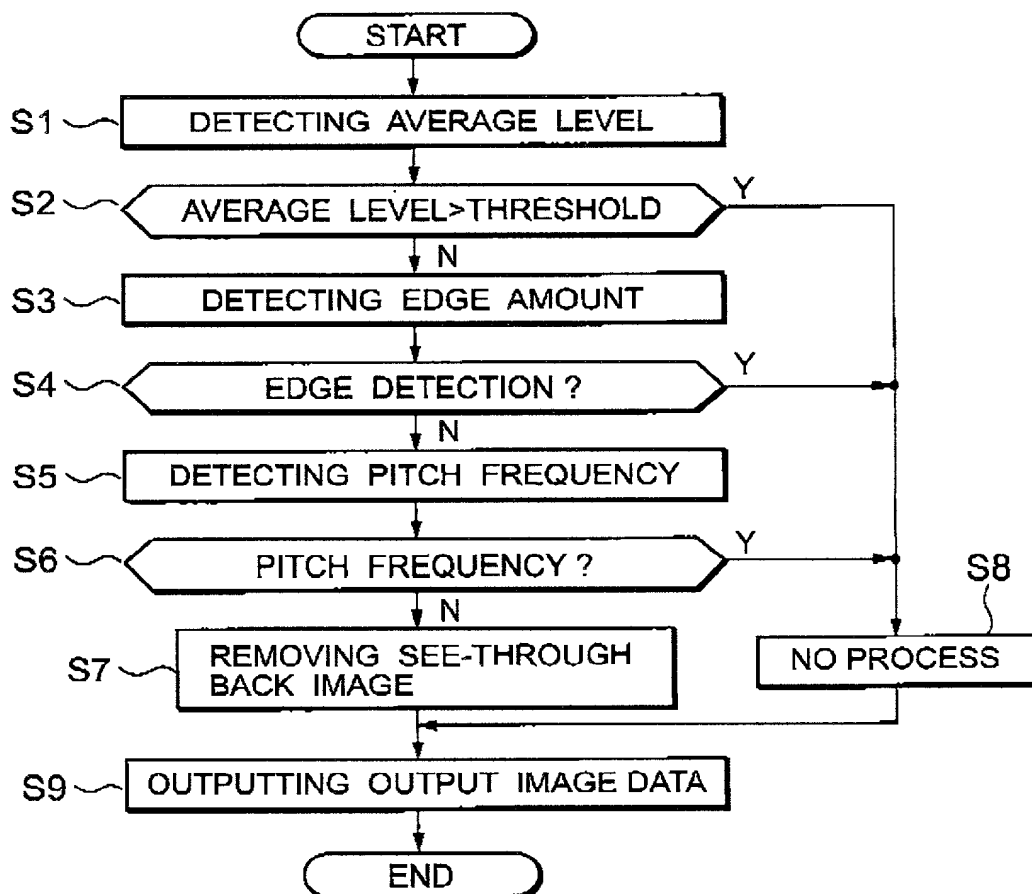


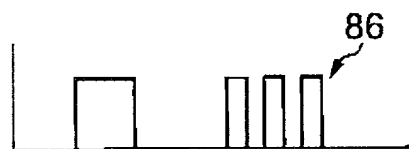
FIG.16

FIG.17A



FRONT DOT PATTERN  
DETECTION

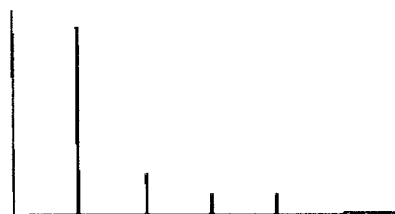
FIG.17B



FRONT IMAGE AFTER  
REMOVING SEE-THROUGH  
BACK IMAGE

FIG.18A

AMPLITUDE

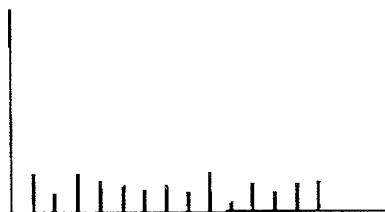


DOT PATTERN IMAGE

FREQUENCY

FIG.18B

AMPLITUDE



SEE-THROUGH BACK  
IMAGE

FREQUENCY

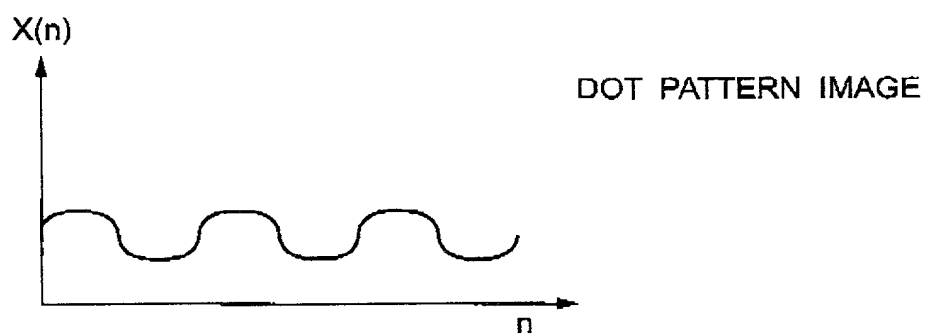


FIG.19A

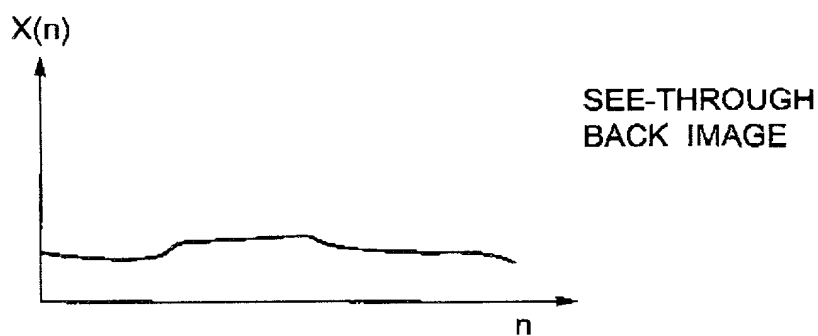


FIG.19B

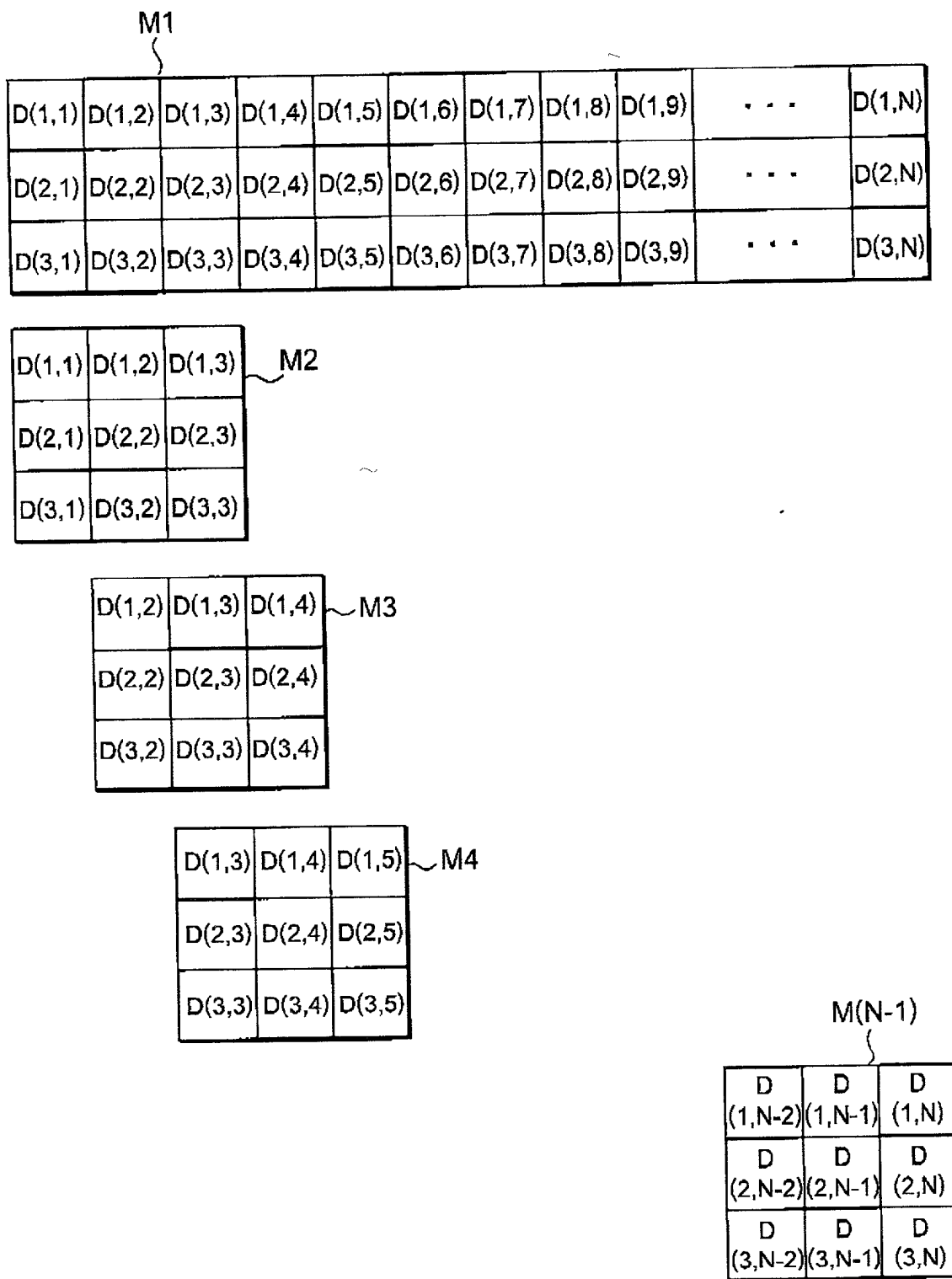


FIG.20